Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V Proposed Permit Renewal No. V-03-037 (Revision 2)
NORTH AMERICAN STAINLESS
GHENT, KENTUCKY
MIN WANG, REVIEWER
August 2, 2006
Plant I.D. # 21-041-00034
Application Log # 55756, AI#: 711, APE#: 20050004

SOURCE DESCRIPTION:

North American Stainless, an existing PSD/Title V major source, submitted a permit modification application to its existing V-03-037 (Rev 1) permit to improve recordkeeping and monitoring requirements. Alternative operating scenarios have been included for existing reverse rolling mills and pickling lines which would reduce emissions as well as require different recordkeeping requirements based on the control technology that may be employed. The plant is a PSD/Title V source because criteria air pollutants potential emissions exceed the major source thresholds.

This application is considered a major modification due to significant changes in monitoring and recordkeeping requirements and the introduction of alternative scenarios for future improvements that could result in changes of the recordkeeping requirements. No air dispersion modeling was required for this permit application since no new emission sources were being introduced. The modeling as completed for Revision 1 of this permit is still representative of the facility and its emissions.

NAS has submitted the modification application on December 8, 2005. This permit is being issued as a significant permit revision.

PUBLIC AND U.S. EPA REVIEW:

Public notice was placed in the Carrollton News Democrat on June 21, 2006. The comment period ended on July 21, 2006. There were only six comments received from North American Stainless on July 18, 2006. The Division's response to comments is discussed below. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Response to Comments for a detailed explanation of the changes made to the permit. The U.S. EPA has 45 days to comment on this proposed permit.

Response to Comments:

Company Comment #1:
On Page 37 of the Permit, testing requirements for units that have already been constructed have been added. These units were constructed under the previous permits (Permits V-97-031, Revisions 4 through 5, and Permit V-03-037) which did not require any performance testing specifically for these sources. The Receiving Bins (EP36) and Lime Hopper/Silos (EP34) are vented to the EAF baghouse which was previously tested. The slag dumping building (EP33) is a fugitive source which cannot be tested due to the size of the building. The remaining sources (except for EP69 and EP87) have been constructed and currently operating under the pervious permit requirements. North American Stainless is requesting that this testing requirement for these sources be deleted from the permit.

Response:
The Division has revised the permit as requested by the source.

Company Comment #2:
Page 43 of the Permit requires VOC and PM testing of the ZMills and Cold Rolling Mill. PM testing of ZMill #3 was completed as required under the previous permit conditions. Since VOC testing was not previously required, NAS is proposing the following language.

"The permittee shall test for PM and VOC within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of Z-Mills 4, 5 and Cold Rolling (EP 92, 95, and 97), the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit."

Response:
The Division has revised the permit as requested by the source.

Company Comment #3:
The specific monitoring requirements for all pickling lines (on Pages 5, 28, 48, 65, 65) state that "The concentration of NO2 in the exit stream of the scrubber, as recorded by the analyzer shall be monitored hourly". Since the data are not automatically recorded, NAS would like this changed to read "The concentration of NO2 in the exit stream of the scrubber as determined by the analyzer shall be recorded hourly."

Response:
The Division has revised the permit as requested by the source.

Company Comment #4:
On page 29 of the Permit, NAS is to monitor and record specific Scrubber operating paramenters at least once daily. As discussed with KYDAQ, this monitoring should be completed at least once per shift. NAS recommends to following language for the Specific Control Equipment Operating Conditions to read:

"The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
1. pH of the scrubbing liquor
2. Pressure Drop across the scrubber."

Response:
The Division has revised the permit as requested by the source.

Company Comment #5:
On page 49 of the Permit, NAS is to monitor and record specific Scrubber operating paramenters at least once daily. As discussed with KYDAQ, this monitoring should be completed at least once per shift. NAS recommends to following language for the Specific Control Equipment Operating Conditions to read:

"The permittee shall monitor and record the following Scrubber operating parameters at least once per shift:
1. pH of the scrubbing liquor
2. Pressure Drop across the scrubber."

Response:
The Division has revised the permit as requested by the source.

Company Comment #6:
On page 77 of the Permit, the specific monitoring requirements state that if the NOx monitor becomes nonoperational, additional process monitoring is required until the NOx monitoring is resumed. The process monitoring should be changed from pH and pressure drop of the scrubber to flow rate of scrubbing liquor and temperature of the reaction chamber. NAS recommends the following language to the second paragraph of the Specific Monitoring Requirements:

"If the NOx monitor becomes nonoperational, additional process monitoring of the control device will be required. The flow rate of scrubbing liquor and temperature of reaction chamber will be recorded on an hourly basis until the hourly NOx monitoring is resumed."

Response:
The Division has revised the permit as requested by the source.

COMMENTS (MAJOR REVISION 2):

Permit modification incorporated the following changes:

1. Emission Point 01(S-01) – Flat Products Annealing furnace #2,
Emission Point 06(S-06) – Annealing Furnace- AP Line #1:

i. Combined emission limits of PM, NOx, CO and VOC for EP-01, EP-06, EP-61, and EP-102. Emission limits presented in Section D.4. of permit.

ii. Compliance demonstration and applicable monitoring requirements have been changed to include natural gas usage and hours of operation.

iii. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emissions observations and Method 9

opacity readings, the natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates, and the hours of operation (per month, and 12 month rolling total).

iv. Testing Requirements (change for EP 01 only): VOCs testing language has been removed, however, the requirement for VOCs testing "VOC emissions testing must be completed within 180 days of KDAQ's request" has been added.

2. Emission Point 03(S-03 & 07) – Flat Products Mixed Acid Pickling #1 and #2:

i. Applicable requirements have been modified: 401 KAR59:010 was removed due to no PM/PM10 emission. The main pollutant from these processes is NOx.

ii. Emission Limitations: opacity requirement was deleted due to 401 KAR 59:010 removal.

iii. Specific Monitoring Requirements: More restricted NOx monitoring requirement was required (hourly instead of daily).

iv. Specific Control Equipment Operation Conditions: Scrubber monitoring parameters were changed from pH and Pressure Drip across the scrubber to Flow rate of the scrubbing liquor and Temperature of reaction chamber since it was not feasible to read the old parameters based on the current scrubber set-up.

3. Emission Point 05(S-05) – Z-Mill #1- Cold Rolling Mill
Emission Point 11(S-21) – Z-Mill #2- Cold Rolling Mill:

i. PM emission rate have been changed from 5.3 tons to 25 tons per year. VOC emission rate has been changed from 50 tons to 100 tons per year. These higher emission rates were used in the Air Dispersion Modeling.

ii. Rolling oil used rate has been redefined as rolling oil make-up rate which is oil added minus loss associated with DE system, oil removal from tank, and other quantifiable losses.

iii. Specific Record Keeping Requirements: VOC emission rates have been added.

iv. Alternative operating scenario for future improvements to Z-Mill #1 & 2 has been added to Section H of permit.

4. **Emission Point 09(S-09) – Boiler #1**
Emission Point 10(S-10) – Boiler #2
Emission Point 110(S-110) – Boiler #3:

i. Applicable Regulations: 401 KAR 60:005, NSPS (40 CFR 60, Subpart Dc is applicable to the indirect heat exchangers constructed after June 9, 1989) has been added.

ii. Specific Record Keeping Requirements: The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day [40 CFR 60.48c(g)] has been added.

5. Emission Point 26(26) – Plate Furnace:

i. Applicable Regulations: 401 KAR 51:017 – Prevention of significant deterioration has been added.

ii. Added emission limits for PM, CO, VOCs: Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, average over three hours shall not exceed 0.13 pounds per hour and 0.55 tons per year 12-month rolling total. VOC emissions shall not exceed 0.09 pounds per hour and 0.40 tons per year.

Carbon monoxide emissions shall not exceed 1.39 pounds per hour and 6.1 tons per year.

iii. Compliance Demonstration Method: Since all the emission limits are related to natural gas usage, all the emission calculations have been changed to be based on natural gas consumption rate and pollutant emission factor. In the past, the demonstration method has been based on stainless steel processing rate.

iv. Specific Monitoring Requirements have been changed to:
   a. The permittee shall perform monthly visual inspections where:
      i. If no visible emissions are observed then no further monitoring is required.
      ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.
   b. The permittee shall monitor hours of operation (per month and 12 month rolling total), natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

v. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, monthly natural gas usage, hours of operation (per month and 12-month rolling period), and the calculated NOx, VOC, CO, and PM/PM10 emission rate.

6. Emission Point 28(S-28) – Plate Pickling:

i. Specific Monitoring Requirements: More restricted NOx monitoring requirement was required (hourly reading instead of daily).

ii. Specific Control Equipment Operation Conditions: The scrubber has been required to be operated at all times that the pickling unit is in operation. Flow rate of the scrubbing liquor has been removed from Scrubber monitoring parameters since pH of the scrubbing liquor and pressure drop across the scrubber have been required for monitoring and recording.

iii. Testing Requirements: "NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations." is added.

7. Emission Point 33(S-33) – Slag Processing:

Slag processing has been changed to Slag Dumping, and description has been changed to: Slag is dumped inside an enclosure where it is then managed and processed by Recmix under Permit V-03-051. Construction Commenced: November 1, 1999

8. Emission Point 60(S-60)– Z-Mill #3- Cold Rolling Mill
Emission Point 92(S-92) – Z-Mill #4
Emission Point 95(S-95) – Z-Mill #5
Emission Point 97(S-97) – Cold Rolling:

i. Added VOCs emission limit of 100 tpy.

ii. Compliance Demonstration Method for VOCs has been added.

iii. Testing Requirements: VOCs testing requirement has been added.

iv. Specific Record Keeping Requirements: VOCs record keeping requirement has been added.

v. BACT for Z-Mill system as determined by North American Stainless is an integral oil mist eliminator with deep bed filter for PM/PM10 control.

9. Emission Point 61(S-61)– Flat Products Annealing Furnace #3:

i. Operating Limitations: Natural gas usage restriction has been removed since the hourly and annual emissions limitations were taken.

ii. Combined emission limits of PM, NOx, CO and VOC for EP-01, EP-06, EP-61, and EP-102. Emission limits requirements are in Section D.4. of permit.

iii. Specific Monitoring Requirements: Process weight of stainless steel has been removed from monitoring. Monthly visible emission observation, VOC, CO, and PM/PM10 emissions monitoring have been added.

iv. Specific Record Keeping Requirements: Process weight of stainless steel has been removed from Record Keeping. Monthly visible emission observation , VOC, CO, and PM/PM10 emissions recordkeeping requirements have been added.

v. Testing Requirements: The requirement for VOCs testing "VOC emissions testing must be completed within 180 days of KDAQ's request" has been added.

10. Emission Point 62(S-62) – AP3 Pickling:

i. Specific Monitoring Requirements: More restricted NOx monitoring requirement was required (hourly instead of daily).

ii. Specific Control Equipment Operation Conditions: Scrubber monitoring parameters were changed from pH and Pressure Drip across the scrubber to Flow rate of the scrubbing liquor and Temperature of reaction chamber since it was not feasible to read the old parameters based on the current scrubber set-up. The scrubber has been required to be operated at all times that the pickling unit is in operation.

iii. Testing Requirements: "NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations." is added.

11. Emission Point 41 – Cooling Tower
Emission Point 41 – Cooling Tower
Emission Point 42 – Evaporator Cooler/Off Gas
Emission Point 46 – Spray and Open Machine Cooling System
Emission Point 47 – Closed Machine Cooling System
Emission Point 63 – AP3 Cooling Tower
Emission Point 64 – Z-Mill 3 Cooling Tower
Emission Point 80 – Long Products AP Cold #2 Cooling Tower #1
Emission Point 81 – Long Products Reheat & Roughing Cooling Tower
Emission Point 82 – Long Products Rolling & Miscellaneous Cooling Tower
Emission Point 93 – Z-Mill #4 Cooling Tower
Emission Point 94 – Z-Mill #5-Cooling Tower
Emission Point 96– Cold Rolling-Cooling Tower
Emission Point 98 – Cold Mill Miscellaneous-Cooling Tower
Emission Point 100 – AP#4 -Cooling Tower
Emission Point 107 – EAF #2 -Cooling Tower
Emission Point 108 – Melt Shop #2 -Cooling Tower

i. Self-imposed emission limits have been taken off.

ii. Testing Requirements: testing requirements have been taken off.

12. Emission Point 37(S-37) – Sludge Disposal
Emission Point 38(S-38)- Scrap Unloading
Emission Point 117(S-117)- Refractory Brick Dumping:

i. Emission Limitation for EP37 in the description has been changed from 6.03E-5 to

2.67E-03 lb/hr. 6.03E-5 was an error in the revision 1 due to unit confusion. Emission Limitation for EP38 in the description has been changed from 5.27E-6 to 8.29E-02 lb/hr. 5.27E-6 was an error in the revision 1 due to unit confusion.

ii. Emission Limitations: The limits are moved from the description to the emission limitations.

13. EP 66 (S-66) – Long Product Reheat furnace

i. Applicable Regulations: 401 KAR 59:010 has been added.

ii. Emission Limitations: "Visible emissions shall not equal or exceed 20 percent opacity" has been added.

iii. Specific Monitoring Requirements have been changed to:

a. The permittee shall perform monthly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor hours of operation, natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions (per month and 12 month rolling total).

iv. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation

14. EP 70 (S-70) – Long Product Annealing Furnace #1
EP 71 (S-71) – Long Product Annealing Furnace #2

i. Applicable Regulations: 401 KAR 59:010 has been added.

ii. Emission Limitations: "Visible emissions shall not equal or exceed 20 percent opacity" has been added.

iii. Testing Requirements: "VOC emissions shall be tested for furnace#2 (EP71) after it is constructed. VOC testing of existing furnace must be completed within 180 days of KDAQ's request" has been added since EP 71 will be constructed in the future.

iv. Specific Monitoring Requirements have been changed to:

a. The permittee shall perform monthly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor hours of operation, natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions (per month and 12 month rolling total).

v. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation.

15. Emission Point 74(S-74) – Long Products Pickling Line #1

Emission Point 75(S-75) – Long Products Pickling Line #2:

i. Applicable requirements have been modified: 401 KAR59:010 was removed due to minimal PM/PM10 emission. The main pollutant from these processes is NOx.

ii. Emission Limitations: opacity requirement was deleted due to 401 KAR 59:010 removal.

iii. Testing Requirements: "NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations." is added.

iv. Specific Monitoring Requirements: More restricted NOx monitoring requirement was required (hourly reading instead of daily).

v. Specific Control Equipment Operation Conditions: Flow rate of the scrubbing liquor has been removed from Scrubber monitoring parameters since pH of the scrubbing liquor and pressure drop across the scrubber have been required for monitoring and recording at least once per shift.

16. Emission Point 78(S-78) – Angle Pickling Pickling Line #1
Emission Point 114(S-114) – Angle Pickling Pickling Line #2:

i. Applicable requirements have been modified: 401 KAR59:010 was removed due to minimal PM/PM10 emission. The main pollutant from these processes is NOx.

ii. Emission Limitations: opacity requirement was deleted due to 401 KAR 59:010 removal.

iii. Testing Requirements: "NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations." is added.

iv. Specific Monitoring Requirements: More restricted NOx monitoring requirement was required (hourly reading instead of daily).

v. Specific Control Equipment Operation Conditions: Flow rate of the scrubbing liquor has been removed from Scrubber monitoring parameters since pH of the scrubbing liquor and pressure drop across the scrubber have been required for monitoring and recording at least once per shift.

17. EP 83 (S-83) – Natural Gas Dryers

i. Applicable Regulations: 401 KAR 59:010 has been added.

ii. Emission Limitations: "Visible emissions shall not equal or exceed 20 percent opacity" has been added.

iii. Testing Requirements: testing requirements have been removed since the emissions only come from burning natural gas.

iv. Specific Monitoring Requirements have been changed to:

a. The permittee shall perform monthly visual inspections where:
   i. If no visible emissions are observed then no further monitoring is required.
   ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor hours of operation (per month and 12 month rolling total), natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions.

v. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation.

18. EP 84 (S-84) – Salt Bath Heater

i. Emission Limitations: "Visible emissions shall not equal or exceed 20 percent opacity" has been added.

ii. Testing Requirements: Testing requirements have been removed since the emissions only come from burning natural gas.

iii. Specific Monitoring Requirements have been changed to:

a. The permittee shall perform monthly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The permittee shall monitor hours of operation, natural gas usage rates, and the calculated nitrogen oxide, VOC, CO and PM/PM10 emissions (per month and 12 month rolling total).

iv. Specific Record Keeping Requirements have been changed to: The permittee shall keep records of the monthly qualitative visible emission observations and Method 9 opacity readings, the monthly natural gas usage, the calculated NOx, CO, VOC, and PM/PM10 emission rates (per month, and 12 month rolling total), and the monthly hours of operation.

19. EP 99 (S-99) – Coil Polishing

i. Emission Limitations: "Particulate emissions shall not exceed 1.2 lb per hour and 5.3 tons per 12-month rolling period" has been changed to "Particulate emissions shall not exceed 1.5 lb per hour and 6.6 tons per 12-month rolling total". The original emission rates were incorrect in the revision 1 permit.

ii. Specific Monitoring Requirements have been changed to:

a. The permittee shall perform weekly visual inspections where:

i. If no visible emissions are observed then no further monitoring is required.

ii. If visible emissions are observed, the permittee shall perform a Method 9 reading.

b. The calculated particulate emissions, and steel usage shall be monitored to ensure compliance with the emissions limits listed above.

20. Emission Point 102(S-102)– Flat Products Annealing Furnace #4:

i. Operating Limitations: Natural gas usage restriction has been removed since the hourly and annual emissions limitations were taken.

ii. See section D.4. of permit for combined emission limits of PM, NOx, CO and VOC for EP-01, EP-06, EP-61, and EP-102.

iii. Specific Monitoring Requirements: Process weight of stainless steel has been removed from monitoring. Monthly visible emission observation, VOC, CO, and PM/PM10 emissions have been added to monitoring requirements.

iv. Specific Record Keeping Requirements: Process weight of stainless steel has been removed from Record Keeping. Monthly visible emission observation , VOC, CO, and PM/PM10 emissions have been added.

21. Emission Point 101(S-101) – Flat Products Pickling #4:

i. Specific Monitoring Requirements: More restricted NOx monitoring requirement

was required (hourly reading instead of daily).

ii. Testing Requirements: "NOx monitor shall be calibrated, operated, and maintained according to manufacturer's recommendations." is added.

iii. Specific Control Equipment Operation Conditions: Scrubber monitoring parameters were changed from pH and Pressure Drip across the scrubber to Flow rate of the scrubbing liquor and Temperature of reaction chamber since it was not feasible to read the old parameters based on the current scrubber set-up.

22. Emission Point 103(S-103)– Acid Recovery Roasters:

i. Operating Limitations: Natural gas usage restriction has been removed since the hourly and annual emissions limitations were taken.

ii. Testing Requirements: VOCs testing requirement has been added.

iii. Specific Monitoring Requirements: Process weight of stainless steel has been removed from monitoring. Monthly visible emission observation, VOC, CO, and PM/PM10 emissions have been added to monitoring requirements.

iv. Specific Record Keeping Requirements: Process weight of stainless steel has been removed from Record Keeping. Monthly visible emission observation, VOC, CO, and PM/PM10 emissions have been added.

23. Section H – Alternative Operating Scenario:

i. **Emission Point 05(S-05) – Z-Mill #1- Cold Rolling Mill:**

ii. **Emission Point 11(S-21) – Z-Mill #2- Cold Rolling Mill:**

a. PM emission rates have been reduced from 25 to 6.6 tons per year. (After changing the PM control device from deflector filter to oil mist eliminator, Z-Mill #1 & 2 will have similar PM emission rate as Z-Mill #3, 4, & 5, which their PM emission limitation after control is 6.6 tpy.)

b. Applicable requirements have been incorporated in the permit.

iii. **Emission Point 28(S-28) Plate Pickling Line:**

iv. **Emission Point 78(S-78) – Angle Pickling Line 1:**

v. **Emission Point 114(S-114) – Angle Pickling Line 2:**

a. NOx emission rates will be reduced from 100 ppm by volume, 1.44 lb/hr, 6.32 tpy to 50 ppm by volume, 0.72 lb/hr, 3.16 tpy.

b. Applicable requirements have been incorporated in the permit.

vi. **Emission Point 74(S-74) – Long Products Pickling Line 1:**

vii. **Emission Point 75(S-75) – Long Products Pickling Line 2:**

a. NOx emission rates will be reduced from 100 ppm by volume, 9.61 lb/hr, 42.10 tpy to 50 ppm by volume, 4.81 lb/hr, 21.05 tpy.

b. Applicable requirements have been incorporated in the permit.

COMMENTS (MAJOR REVISION 1):

1. Emission Point 01(S-01) – Annealing furnace- AP Line:

Annealing furnace capacity has been increased from 65 to 70 mmBTU/hr. The annual operating restrictions have been removed.

2. Emission Point 02(S-02) – Shot Blaster- Hot AP Line:

Two Pangborn shot blasters process capacity have become internally vented with improved air pollution control equipment. This unit has been classified as an insignificant source.

3. Emission Point 03(S-03 & 07) – Mixed Acid Pickling Lines:
Two acid pickling lines (AP1 and AP2) have their emissions vented together to one selective catalytic reduction (SCR) scrubber with NOx emissions limited to 50 ppm.

4. Emission Point 05(S-05) – Z-Mill #1- Cold Rolling Mill:
i. PM emission rates have been reduced from 25 to 5.3 tons per year. (Based on vendor's guarantee)
iv. Applicable requirements have been incorporated in the permit.

5. Emission Point 06(S-06) – Annealing Furnace- Cold AP Line:
Annual operating limitation for 85 mmBtu/hr furnace has been removed.

6. Emission Point 08(S-08) – Lime unloading:
Filter control efficiency has been lowered from 99% to 98%.

7. Emission Point 11(S-21) – Z-Mill #2- Cold Rolling Mill:
a) PM emission rates have been reduced from 25 to 5.3 tons per year. (Based on vendor's guarantee)
b) Applicable requirements have been incorporated in the permit.

8. Emission Point 26(26) – Plate Furnace:
The annual operating time has been increased to 8760 hours/year. The self-imposed NOx annual emission limit that was combined for EP26 and 28 has been removed.

9. Emission Point 28(28) – Plate Pickling:
The annual operating time has been increased to 8760 hours/year. The annual emission limits have been removed.

10. Emission Point 29(29) – Tundish Preheaters:
North American Stainless will install three additional tundish preheaters to have a total of four preheaters. Only two preheaters (3.8 mmBtu/hr each) will operate simultaneously. Two will be standby units.

11. Emission Point 30(30) – SEN Preheaters:
North American Stainless will operate ten preheaters (0.16 mmBtu/hr each) simultaneously and will have 5 units as standby units.

12. Emission Point 31(31) – Alloy System:
The addition system that supplies flux materials and ferro alloys to the EAFs and AODs will be increase to obtain a processing rate of 1000 tons per hour. The maximum hourly emission limit will not change.

13. Emission Point 33(33) – Slag Dump Building:
The quantity of slag dumped for transfer of slag will increase to 34.8 tons per hour. The slag is processed by separate permittee.

14. Emission Point 49-56(49-56) – Ladle Preheaters:

North American Stainless will operate a maximum of 9 ladle preheaters simultaneously, and will have two additional standby units. Each will have a maximum burner capacity of 16.8 mmBtu/hr. The total annual capacity will not exceed 12,930 mmBtu/yr.

15. Emission Points 57(26) and 105(105) – Electric Arc Furnaces (EAF1 & EAF2) and the associated dust handling equipment:

North American Stainless has proposed to install a second EAF that will operate when EAF1 is operating. The maximum liquid steel production rates of each EAF will be 133 tons per hour as based on an annual average. The total maximum annual production rate of the combined EAF units will be 1,500,000 metric tons per year of stainless steel casted.

i. EAF2.
   a. Particulate emissions: 25.71 pounds per hour and 96.654 pounds per ton .
   b. Carbon monoxide: 2 pounds per ton and 266 pounds per hour.
   c. Nitrogen dioxide: 1.00 pound per ton and 133 pounds per hour.
   d. Volatile organic compound: 0.150 pound per ton and 19.95 pounds per hour.
   e. Lead: 1.158 pound per ton and 0.309 pound per hour.
   f. Graphite electrode sulfur content shall not exceed 0.02%.

ii. Annual Limits EAF1 & EAF2.
   a. Particulate emissions: 138.24 tons per year.
   b. Carbon monoxide: 1653.36 tons per year.
   c. Nitrogen dioxide: 1010.86 tons per year.
   d. Volatile organic compound:124.04 tons per year.
   e. Lead: 1.66 tons per year.

16. Emission Points 58(27) and 106(106) – Argon Oxygen Decarburization (AOD1 & AOD2) Vessels:

North American Stainless has proposed to install a second AOD that will operate when AOD1 is operating. The maximum liquid steel production rates of each AOD will be 133 tons per hour as based on an annual average. The total maximum annual production rate of the combined AOD units will be 1,500,000 metric tons per year of stainless steel casted.

i. AOD2.
   a. Particulate emissions: 25.71 pounds per hour and 38.66 pounds per ton.
   b. Carbon monoxide: 2.06 pounds per ton and 273.98 pounds per hour.
   c. Nitrogen dioxide: 0.58 pound per ton and 76.87 pounds per hour.
   d. Lead: 0.470 pound per ton and 0.31 pound per hour.

ii. Annual Limits AOD1 & AOD2.
   a. Particulate emissions: 138.24 tons per year
   b. Carbon monoxide: 1703 tons per year.
   c. Nitrogen dioxide: 447.87 tons per year
   d. Lead: 1.70 tons per year

17. Emission Point 59(28) – AOD Preheaters:

North American Stainless has proposed to install a second AOD preheater and two additional standby units. Only two AOD preheaters will operate simultaneously. The heat input for each preheater will be 25 mmBtu/hour. The total annual capacity will not exceed 438,000 mmBtu/yr.

18. Emission Point 61– AP3 Furnace:

iii. The capacity of the furnace has been reduced to it actual "as-built" capacity.
iv. Emission have been reduced based on it actual emissions and 8760 hours of operation per year.
   a. NOx emissions have been reduced from 9.12 to 4.05 lbs/hr, and 26.9 to 17.74 tons per 12 month rolling average.
   b. Particulate emissions have been reduced from 0.85 to 0.51 lb/hr, and 2.5 to 2.25 tons per 12 month rolling average.
   c. Carbon monoxide emissions have been reduced from 9.39 to 5.67 lb/hr, and 27.7 to 24.83 tons per 12 month rolling average.
   d. VOC emissions have been reduced from 0.61 to 0.37 lb/hr, and 1.81 to 1.63 tons per 12 month rolling average.
v. Emission rate calculations have been rectified.

19. Emission Point 63 – AP3 Cooling Tower:

North American Stainless reduced the maximum water flow capacity of the permit to the maximum water flow capacity as built. Particulate emissions have been reduced from 0.085 lb per hour to 0.053 lb per hour.

20. Emission Point 64 – ZMill 3 Cooling Tower:

North American Stainless reduced the maximum water flow capacity of the permit to the maximum water flow capacity as built. Particulate emissions have been reduced from 0.085 lb per hour to 0.053 lb per hour.

21. Emission Point 77(77) – Angle Shotblasting:

The angle shotblaster were constructed to be internally vented with air pollution control equipment. This unit has been classified as an insignificant source.

22. Emission Point 78(78) – Pickling Line:

i. Nitrogen oxide emissions have been reduced from 100 to 75 ppm by volume, 1.44 to 1.08 lbs/hr, and 6.32 to 4.74 tons per 12 month rolling average. (Based on vendor's guarantee)
ii. Nitrogen Oxide emissions rate calculation has been rectified.

23. Emission Point 93 – ZMill #4 Cooling Tower:

North American Stainless reduced the maximum water flow capacity of the permit to the maximum water flow capacity as built. Particulate emissions have been reduced from 0.085 lb per hour to 0.06 lb per hour.

24. Emission Point 94 – Z-Mill #5-Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower as determined by the Division is drift eliminator.

25. Emission Point 95 – Z-Mill #5 (a new emission point):

i. North American Stainless has proposed to construct a reversing cold rolling mill in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.

iii. Maximum Particulate Matter emission rate is 1.5 lbs/hr based on vendor guarantees.
iv. BACT for Z-mill system as determined by the Division is an integral oil mist eliminator.

26. Emission Point 96– Z-Mill #6-Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower as determined by the Division is drift eliminator.

27. Emission Point 98– Tandem Rolling-Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower as determined by the Division is drift eliminator.

28. Emission Point 98 – Cold Mill Miscellaneous-Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower as determined by the Division is drift eliminator.

29. Emission Point 99 – Grind & Polish #2 (a new emission point):

i. North American Stainless has proposed to construct a grind & polish line in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 1.5 lbs/hr based on vendor guarantees.
iv. BACT for grind & polish line as determined by the Division is an integral oil mist eliminator.

30. Emission Point 100 – AP#4 -Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower as determined by the Division is drift eliminator.

31. Emission Point 101 – Hot AP #4 Pickling (a new emission point):

i. North American Stainless has proposed to construct a pickling line in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Nitrogen Oxide emission rate is 50 ppm and 4.81 lb per hour.
iv. BACT for AP as determined by the Division is selective catalytic reduction scrubber.

32. Emission Point 102 – Hot AP #4 Furnace (a new emission point):

i. North American Stainless has proposed to construct an annealing furnace in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Emissions rates are 0.99 lb/hr of particulate, 7.8 lb/hr of nitrogen oxide, 10.92 lb/hr of carbon monoxide, and 0.72 lb/hr of volatile organic compounds.

iv. BACT for AP as determined by the Division are combustion of natural gas and dry low NOx burners.

33. Emission Point 103 – Acid Recovery Roaster (a new emission point):

i. North American Stainless has proposed to construct an acid recover roaster in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Emissions rates are 0.30 lb/hr of particulate, 3.9 lb/hr of nitrogen oxide, 1.95 lb/hr of carbon monoxide, and 0.21 lb/hr of volatile organic compounds.
iv. BACT for the roaster as determined by the Division is combustion of natural gas and dry low NOx burners.

34. Emission Point 104 – Acid Recovery Line (a new emission point):

i. North American Stainless has proposed to construct an acid recover system in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Nitrogen Oxide emission rate is 50 ppm and 0.48 lb per hour.

35. Emission Point 107 – EAF #2 -Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.17 lbs/hr.
iv. BACT for cooling tower determined by the Division is drift eliminators.

36. Emission Point 108 – Melt Shop #2 -Cooling Tower (a new emission point):

i. North American Stainless has proposed to construct a cooling tower in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum Particulate Matter emission rate is 0.06 lbs/hr.
iv. BACT for cooling tower determined by the Division is drift eliminator.

37. Emission Point 110 – Boiler #3-Standby Unit (a new emission point):

i. North American Stainless has proposed to construct a natural gas-fired boiler in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Unit can only be operated if Boiler #1 or #2 is not operating.

38. Emission Point 111 – AP #4 Shot Blaster (a new emission point):

i. North American Stainless has proposed to construct an internally vented shot blaster for AP #4 in April 2005.
ii. Unit has been identified as insignificant source in the permit.

39. Emission Point 112 – Refractory Dumping (a new emission point):

i. North American Stainless will increase the quantity of refractory brick being removed and placed in dumpsters to transfer it offsite.
ii. Applicable regulations and requirements have been incorporated in the permit.

40. Emission Point 113 – Tundish Dryer (a new emission point):

North American Stainless will install three tundish dryers to have a total of three dryers.

Only two dryers (2.4 mmBtu/hr each) will operate simultaneously. One will be a standby unit.

41. Emission Point 114– Angle Pickling Line #2:

i. North American Stainless has proposed to construct an angle pickling line #2 in April 2005.
ii. Applicable regulations and requirements have been incorporated in the permit.
iii. Maximum NOx emission rate is 75 ppm, 1.08 lbs/hr, and 4.74 ton per year.
iv. BACT for angle pickling as determined by the Division is chemical scrubber.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.